

DP-309920

INTEGRATED FUEL REFORMER AND HEAT EXCHANGER

ABSTRACT OF THE DISCLOSURE

An integrated exothermic hydrocarbon fuel reformer (12) and heat exchanger (14) is a compact, modular structure in which reaction air pre heating for the ambient air and simultaneous cooling for the hydrogen rich
5 reformat is provided by a nested series of alternating reformat passages (42) and air passages (44) created by a corrugated fin (38) brazed between inner and outer concentric walls (32 and 34). The reformer outer wall (22) and air pre heating exchanger outer wall (34) may be a common structure. In addition, a
10 secondary heat exchanger (16) of similar structure may be abutted to the primary heat exchanger (14) for further reformat cooling and further waste heat recovery.